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10/600,602	06/23/2003	Tetsuro Tayu	50195-366	9582

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McDERMOTT, WILL & EMERY  
600 13th Street, N.W.  
Washington, DC 20005-3096

EXAMINER
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SHEEHAN, JOHN P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/600,602

Applicant(s)

TAYU ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-12,14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 13 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).
2. The attempt to incorporate subject matter into this application by reference to Japanese Patent Application No. P2002-187912 (see specification page 19, lines 8 and 9) is ineffective because it is considered that this Japanese application contains essential and non-essential material. However, essential material may be incorporated by reference only to U.S. patent or to a U.S. patent application publication, MPEP 608.01(p).

***Claim Rejections - 35 USC § 102/103***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 to 10, 12, 14, 16 and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese Patent Publication No. 2000-082610(Japan '610).

NOTE: All references by the Examiner to Japan '610 are based on the machine translation that was attached to the Office action mailed September 29, 2004.

Japan '610 teaches making a rare earth-iron-boron permanent magnet by mixing a rare earth-iron-boron powder with a rare earth oxide, aligning the powder mixture in a magnetic field, compacting the powder mixture and sintering (Japan '610, page 2, paragraphs 0018, 0019 and 0029 to 0032). Japan '610 teaches that the rare earth-iron-boron alloy powder is prepared by HDDR (paragraph 0017) as is recited in applicants' claim 12. Japan '610 also teaches that a mean particle size of 2 to 8 microns (paragraph 0021) which is encompassed by the particle size recited in applicants'

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claims 9, 12, and 16. The process taught by Japan '610 is the same process as recited in applicants' process claims 5 to 7, 12 and 14 and the resulting product appears to be the same as recited in applicants' claims 1 to 4, 9 and 10. Japan '610 teaches that the disclosed permanent product can be used in an electric motor as recited in applicants' claims 8, 16 and 17 (Japan '610, page 1, paragraph 0001). Japan '610 teaches that adding the rare earth oxide to the rare earth permanent magnet powder increases the electrical resistance of the finished permanent magnet (Abstract).

The claims and Japan '610 differ in that Japan '610 is silent with respect to "the rare earth particle is constituted by a cluster of numerous crystal grains" and the crystal grain size recited dependent claims 9, 10, 14, 16 and 17.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the sintered rare earth-iron-boron product taught by Japan '610 has a composition that is encompassed by the instant claims and is made by a process which is similar to, if not the same as, applicants' process of making the instantly claimed alloy including the use of HDDR to form the rare earth-iron-boron alloy powder. In view of this, Japan '610's sintered rare earth-iron-boron product would be expected to possess all the same properties as recited in the instant claims, including the feature that "the rare earth particle is constituted by a cluster of numerous crystal grains" and the crystal size recited in claims 9, 10, 14, 16 and 17, *In re Best*, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, *In re Best*, 195 USPQ

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430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

1. Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '610 as applied to claim 1 to 10, 12, 14, 16 and 17 above, and further in view of Hamada et al. (US Patent No. 5,316,595).

Japan '610 teaches and is applied as set forth above.

Hamada teaches coating sintered rare earth-iron-boron permanent magnets with a protective coating that reduces corrosion and eliminates the deterioration of the magnetic properties of the magnet (column 2, lines 41 to 58).

Japan '610 and claims differ in that Japan '610 does not teach coating the sintered rare earth-iron-boron permanent magnets.

However, one of ordinary skill in the art at the time the invention was made would have been motivated to add a protective coating to Japan '610's sintered rare earth-iron-boron permanents so as to reduce the corrosion and eliminate the deterioration of the magnetic properties of the magnet.

### ***Double Patenting, etc.***

The provisional obvious double patenting rejection set forth in the previous Office action has been dropped in view of the fact that in the instant claims the rare earth oxide is limited to  $R_2O_3$  wherein "R is any one of terbium, dysprosium, holmium, erbium,

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thulium, ytterbium, and lutetium" (emphasis added by the Examiner), that is, the rare earth element of the rare earth oxide of the instantly claimed invention is limited to a single rare earth selected from the recited Markush group. On the other hand, in the claims of 10/809,422 the rare earth oxide has the formula  $R_{2x}R'_{2(1-x)}O_3$  wherein  $0 < x < 1$  and R and R' refer to different rare earth elements, that is, the rare earth of the rare earth oxide of claims of 10/809,422 must be made up of 2 different rare earths and the rare earth element of the rare earth oxide cannot be a single rare earth as in 10/600,602.

***Allowable Subject Matter***

2. Claims 13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. The following is a statement of reasons for the indication of allowable subject matter: The primary reason for the indication that claims 13 and 15 are directed to allowable subject matter is that none of the references alone or in combination teach or suggest the method recited in claim 5 where the molding step is performed at 600<sup>0</sup>C to 850<sup>0</sup>C as recited in claim 13 or the process of claim 5 wherein the step of preparing the mixture is performed by MOCVD as recited in claim 15.

***Response to Arguments***

4. Applicant's arguments filed February 28, 2005 have been fully considered but they are not persuasive.

Applicants argue that Japan '610 does not teach that the rare earth particle is composed of a cluster of fine crystal grains. This is not persuasive. Applicants have disclosed that this rare earth particle structure is the result of manufacturing the rare earth-iron-boron alloy powder using HDDR (page 8, lines 20 to 30). Japan '610 teaches that the rare earth-iron-boron alloy powder used in Japan '610's process is prepared by HDDR (Japan '610, paragraph 0017). Thus, since Japan '610's powder and applicants' powder are prepared in the same manner Japan '610's powder would be expect to possess all of the same properties as the powder recited in applicants' claims, including the rare earth particle being composed of a cluster of fine crystal grains. This position is further supported in applicants' response wherein applicants state that HDDR provides "rare earth magnet particles constituted by clusters of numerous crystal grains" (Page 9, second full paragraph)

Applicants point out that the rare earth oxide functions as an insulation material and that the electrical resistance of the rare earth magnet is enhanced. This is not persuasive in that Japan '610 teaches that the electrical resistance of the sintered magnet is improved by the rare earth oxide (English language Abstract, line 7).

Applicants' arguments regarding the crystal grain size limitations recited in claims 9, 10, 14, 16 and 17 have been addressed in the statement of the rejection as newly written in response to the applicants' amendment of the claims.



Applicants' argument that the sintering temperature taught by Japan '610 would cause the rare earth magnet particles to coarsen to a size larger than the 1 to 500 micron size recited in claims 9, 14 and 16 is not persuasive in that applicants have not provided any evidence to support their allegation. Further, with the exception of claims 9, 14 and 16 applicants' claims are silent with respect to the grain size of the rare earth magnet particle size and with the exception of claim 13, applicants claims are silent with respect to the temperature used in applicants' process.

Applicants, relying on an article (K. Hiraga et al.) and drawings submitted with their response argue that Japan '610's sintering temperature would cause an Nd-Fe rich layer to be produced and that the resulting magnet would not have a high electrical resistance. This is not persuasive. The drawings submitted by applicants are not in affidavit or declaration form and therefore are given no weight. Further, in view of the fact that the drawings are not in affidavit or declaration form, they, in combination with applicants' arguments, are considered to be no more than unsupported attorney's argument, see MPEP 716.01(c).

**I. < TO BE OF PROBATIVE VALUE, ANY  
OBJECTIVE EVIDENCE SHOULD BE  
SUPPORTED BY ACTUAL PROOF**

Objective evidence which must be factually supported by an appropriate affidavit or declaration to be of probative value includes evidence of unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, and allegations that the author(s) of the prior art derived the disclosed subject matter from the applicant. See, for example, *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984) ("It is well settled that unexpected results must be established by factual evidence." "[A]ppellants have not presented any experimental data showing

that prior heat-shrinkable articles split. Due to the absence of tests comparing appellant's heat shrinkable articles with those of the closest prior art, we conclude that appellant's assertions of unexpected results constitute mere argument." See also *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972); *Ex parte George*, 21 USPQ2d 1058 (Bd. Pat. App. & Inter. 1991).

"It is well settled that unexpected results must be established by factual evidence. Mere argument or conclusory statements in the specification do not suffice." *In re Deblauwe*, 222 USPQ 191, 196 (Fed. Cir. 1984). Mere lawyer's arguments and conclusory statements in the specification, unsupported by objective evidence, are insufficient to establish unexpected results." *In re Wood, Whittaker, Stirling and Ohta*, 199 USPQ 137, 140 (CCPA 1978), also see MPEP 716.01(c).

## **II. < ATTORNEY ARGUMENTS CANNOT TAKE THE PLACE OF EVIDENCE**

The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). Examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration include statements regarding unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, and allegations that the author(s) of the prior art derived the disclosed subject matter from the applicant.

Further, with the exception of claim 13, the claims are silent with respect to the processing temperature and all of the claims are silent with respect to the electrical resistance of the rare earth magnet. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding the article (K. Hiraga et al.) that applicants have submitted, it is the Examiner's position that the article is directed to a rare earth magnet not containing a rare earth oxide as is taught by Japan '610 and thus is not relevant to Japan '610's magnet and accordingly, is not persuasive.

Finally, Japan '610 teaches that the addition of the rare earth oxide to the rare earth magnet does in fact improve the electrical resistance of the rare earth magnet (Abstract, line 7) just as in applicants' invention.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John P. Sheehan  
Primary Examiner  
Art Unit 1742

jps